

REMARKS

The present response replies to the Office Action dated February 5, 2007.

Claims 35-71 are pending in the present application. Claims 72-81 have been added, with claims 1-34 having been previously cancelled. The support for added claims 72-81 are found in the Specification. By way of example, the support for claims 72-77 is found at paragraph [0025] of the Specification as filed, with reference to FIGs. 2A and 2B, describing and illustrating the use of encrypted PN sequences to encrypt the transmission (“data symbol”) from a mobile station (user terminal) or a base station. By way of further example, the support for claims 78-81 is found at paragraphs [0021] and [0027], with reference to FIG. 1, describing and illustrating the base station 16 and the mobile station 12 (with the mobile station 12 also referred to as a “user terminal” in general). Applicant believes that the present application is now in condition for allowance, which prompt and favorable action is respectfully requested.

Claim Rejections - 35 USC § 112

Claim 45 is rejected under 35 U.S.C. 112, first paragraph, as being incomplete for omitting essential elements. Specifically, the Examiner has noted a clerical error in the claim. In response, Applicant has amended claim 45 in a manner consistent with the statutory requirements under section 112. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

Claim Rejections – 35 USC § 102

Claims 35, 36, 40, 41, 45, 46, 50-53, 58, 59, 64, 65, 70, 71 have been rejected under 35 U.S.C. §102(e) as being anticipated by Yang et al., U.S. Patent No. 6,331,974 (“Yang”). This rejection is traversed with respect to the pending claims.

In conventional spread spectrum wireless system, data is often encrypted with a key and then spread using a pseudo-random number (PN). The encryption process provides security for the data and the spreading process enables multiple access to the wireless system by many users. Applicant discloses a novel and unobvious variation to these processes. Instead of encrypting the data, Applicant teaches a process for encrypting the PN sequence that is used to spread the data. This results in the entire communication being encrypted, right down to the chip level, making it more difficult to eavesdrop.

Yang, the primary reference relied on by the Examiner, discloses a process that is fundamentally different from Applicant's. In contrast to Applicant's novel and unobvious solution, Yang is directed to a process of using a PN sequence to directly spread the RF carrier to produce a frequency hopping spread spectrum signal, and thereby reduce the effects of narrowband interference. Although a frequency hopping spread spectrum signal does provide a level of security from eavesdroppers, Applicant is not seeking broad protection on the concept of secured or encrypted communications. Rather, Applicant is seeking protection for a specific process of spreading data with an encrypted PN sequence.

Referring now to the specific claims, Applicant submits that they recite subject matter which is neither disclosed nor suggested by Yang. Independent claim 35, for example, recites:

“generating at least one encryption sequence ... combining the PN sequence with said encryption sequence to render an encrypted PN sequence” and “using the encrypted PN sequence to spread the communication signal.”

And claim 72 recites:

“wherein the communication signal comprises a data symbol, and the method further comprises using the encrypting PN sequence to spread the data symbol.”

With reference to claim 35, Yang simply does not teach or suggest the process of “generating at least one encryption sequence,” and therefore, cannot combine a “PN sequence with said encryption sequence.” In addition, Yang does not teach or suggest spreading the a data symbol, let alone spreading the data symbol with an “encrypted PN sequence.” Accordingly, Yang is insufficient as a matter of law to support an anticipatory rejection of claim 35, its dependencies, and claim 72. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of these claims.

Independent claims 40, 45, 50-52, 58, 64, 70 and 71, and their dependencies, recite similar limitations as claim 35. Therefore, Yang cannot be said to anticipate these claims for the same reasons set forth hereinbefore, as well as the additional limitations recited. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of these claims as well.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 37-39, 42-44, 47-49, 54-57, 60-63 and 66-69 as being unpatentable over Yang as applied to claims 35, 40, 45, 52, 58 and 64, respectively above, and further in view of DeBellis et al., U.S. Patent No. 6, 044,388 ("DeBellis").

Applicant submits that claims 37-39, 42-44, 47-49, 54-57, 60-63 and 66-69, as being dependent, either directly or indirectly, from one of the independent claims discussed above, and therefore, include all the limitations of the claims from which they respectively depend. As Yang does not teach or suggest the limitations in the respective independent claims from which these claims depend, and as DeBellis does not address the deficiency of Yang, Applicant respectfully submits that these claims are allowable over Yang and DeBellis, individually or combined. Accordingly, these claims are also allowable over the art of record for the same reasons set forth hereinbefore, as well as the additional limitations recited. These additional limitations will not be addressed at this time because a *prima facie* case has not been established against the independent claims.

CONCLUSION

In light of the amendments contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested. If the Examiner feels the application is not in condition for allowance, the Examiner is invited to call the Attorney below to discuss any steps the Examiner feels is necessary to put the case in condition for allowance.

Respectfully submitted,

Dated: 07.05.07

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